

## II. REMARKS

### A. Introduction

The Office Action dated January 7, 1997 (Office Action) has been carefully reviewed and the foregoing amendments made in response thereto. The Office Action generally rejects all pending claims 3-20 under 35 U.S.C. § 112, second paragraph, for indefiniteness. The Office Action again rejects claims 6, 9, 11 and 14 under 35 U.S.C. § 112, second paragraph, for various enumerated informalities. Claims 4, 11 and 14 are rejected under 35 U.S.C. § 112, first and second paragraphs. The specification is objected to under 35 U.S.C. § 112, first paragraph, for failure to provide an enabling disclosure with respect to the subject matter of claims 4, 11, and 14, also rejected under the same provision. Claims 9 and 10 are rejected under the judicially created doctrine of obviousness-type double patenting as unpatentable over claims 1-13 of U.S. Pat. No. 4,694,490. Claims 6, 11 and 15 are rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness. All claims 3 through 20 are rejected under the judicially created doctrine of non-obviousness non-statutory double patenting over the patented claims in U.S. Patents 4,694,490; 4,704,725; 4,965,825; and 5,109,414; and copending U.S. application 08/113,329 and related U.S. applications numbered 1-327 in the Office Action, Paper No. 8 (p. 13-15) , mailed on January 7, 1997.

Applicants have amended the claims to address the Examiner's concerns. In accordance with the foregoing, the pending claims have been amended to improve clarity, and further, to respond to certain rejections made by the Examiner arising under 35 U.S.C. § 112. The Examiner's comments on the claims are acknowledged and

appreciated. No new matter is presented in the foregoing amendments. Approval and entry of same is respectfully requested.

Regarding paragraph 1 of the Office Action, Applicants respectfully point out that the Information Disclosure Statements filed for the subject application claim priority back to the application filed November 3, 1981, and issued as U.S. Pat. No. 4,694,490 on September 15, 1987. The present application claims priority under 35 U.S.C. § 120 of the following applications:

<u>Serial No.</u>	<u>Filing Date</u>	<u>Patent No.</u>
08/113,329	August 30, 1993	Pending
08/056,501	May 3, 1993	5,335,277
07/849,226	March 10, 1992	5,233,654
07/588,126	September 25, 1990	5,109,414
07/096,096	September 11, 1987	4,965,825
06/829,531	February 14, 1986	4,704,725
06/317,510	November 3, 1981	4,694,490

Consequently, the Applicants will demonstrate disclosure with respect to the "81 case", App. Ser. No. 06/317,510 and issued as U.S. Pat. No. 4,694,490. Applicants will address the rejections under 35 U.S.C. § 112 in section B below. Applicants will address the rejections for nonstatutory obviousness-type double patenting in section C below. Applicants will address the art rejections of the Office Action in sections D of the response. Applicants will address the nonstatutory nonobviousness type double patenting rejection in Section E below.

As to the paragraph numbered 2, Applicants acknowledge their duty to maintain a line of patentable demarcation between related applications. Assuming *arguendo* that

substantially duplicate claims exist, the Applicants intend to make a good faith effort to alert the PTO of any instances in which the PTO treats such claims inconsistently.

As to the paragraph numbered 3, Applicants acknowledge and appreciate the Examiner's concern over the use of alternative claim language. Applicants believe that the disclosure supports every possible embodiment or permutation that can be created using said language. During the prosecution of this application, Applicants intend to ensure that the disclosure supports each possible embodiment as claimed using alternative claims.

As to paragraphs 6 through 12 of the Office Action, Applicants' views are fully discussed in Applicants' reply brief to the rejections in application number 08/113,329, hereby incorporated by reference. Applicants will not repeat portions the response which are identical in this application. Applicants will discuss those portions of the double patenting rejection that are specific to the present application in section E *infra*.

Paragraph 9 of the Office Action states that "determination of a possible non-statutory double patenting rejection obvious-type in each of the related 327 applications over each other will be deferred until a later time." (Office Action, p. 12, par. 9).

Applicants submit that the Examiner and the PTO cannot defer further rejections to a later time. Every ground of rejection should be made in Examiner's first office action. Title 37 of the CFR states that "[o]n taking up an application for examination . . . the examiner shall make a thorough study thereof and shall make a thorough investigation of the available prior art relating to the subject matter of the claimed invention. The examination shall be complete with respect to both compliance of the application . . .

with the applicable statutes and rules and to the patentability of the invention as claimed, as well as with respect to matters of form, unless otherwise indicated.” 37 CFR § 1.104(a). The MPEP states “[t]he examiner’s action will be complete as to all matters, except that in appropriate circumstances, such as misjoinder of invention, fundamental defects in the application, and the like, the action of the examiner may be limited to such matters before action is made.” MPEP § 707.07, quoting 37 CFR § 1.105. Finally, “[p]iecemeal examination should be avoided as much as possible. The examiner ordinarily should reject each claim on all valid grounds available . . . Where a major technical rejection is proper, it should be stated with full development of reasons rather than by mere conclusion coupled with some stereotyped expression.” MPEP §707.07(g). Applicants submit that the Examiner has a duty to give each application a complete examination, that rejections be made with specificity, and that deferred rejections are not allowed. For these reasons, Applicants likewise traverse the rejection based on the “judicially created doctrine of double patenting over the claims of copending U.S. application 08/113,329 and the following [list of all applicants copending applications].” Applicants submit that this rejection, even if appropriately made with specificity, should be a provisional double patenting rejection. Applicants respectfully request that this rejection be withdrawn.

As to the paragraph related to the multiplicity rejection in parent file 07/096,096, Applicants submit that the PTO gave a multiplicity rejection in this case and limited Applicants to twenty-five claims. Roughly one hundred claims had been originally filed. There was no substantive review of any of the other claims outside of the twenty

five. Applicants were not permitted to submit additional claims although a request was made. The disclosure of Applicants address too many subject areas to be adequately covered by a small number of claims. Applicant submit that "nexus" analysis is not required by Applicants.

As to paragraphs 13-19 and 21, containing various rejections and objections under 35 U.S.C. § 112, Applicants have amended the pending claims to further the Examiner's understanding of the claimed subject matter. Applicants, where requested and where necessary, have provided citations to the specification to demonstrate enablement. Applicants submit that the claims, as amended, are distinct as well as properly described and fully enabled by the priority disclosure. Applicants will provide detailed remarks on the Examiner's specific objections and queries in section B *infra*.

As to paragraph 20's rejection of claims 9 and 10 for nonstatutory obviousness-type double patenting, Applicants submit that the rejection should be withdrawn since the Examiner has not met his burden in demonstrating that the claimed subject matter would have been obvious to one of ordinary skill in the art considering the patented subject matter. Applicants will address the nonstatutory obviousness-type double patenting rejection in section C *infra*.

As to paragraph 22's rejection of claims 3-17 under 35 U.S.C. § 102(e) as anticipated by Jeffers, *et. al.*, U.S. Pat. No. 4,739,510, Applicants traverse the rejection since the cited art is not prior art under § 102(e) with regards to the present application. As to paragraph 23's rejection of claims 18-20 as anticipated by Pargee, Jr., U.S. Pat. No.

4,422,093, Applicants will demonstrate, in the first instance, that said art is not prior art under the cited section of the Patent Statute, 35 U.S.C. § 102(b). Applicants will further demonstrate that the subject matter of claim is patentable over this reference since there are elements not disclosed or suggested by the cited art. Applicants will provide detailed argument on the art rejection in sections D *infra*.

As to the paragraph 24, Applicants acknowledge and appreciate the interviews provided by the PTO. Applicants also appreciate the detailed description of the interviews provided in the Office Action. The Office Action states that "the Group would like to have a complete grouping of applications in a manner that was submitted earlier for only a portion of the total filings." Applicants note that based on the Office Actions received thus far, the PTO does not appear to be following the groupings applicants submitted previously. The order of examination of Applicants' applications do not seem to have any correspondence to the groupings previously submitted. Applicants, therefore, will not supply further groupings. Applicants will, however, gladly supply further groupings if requested by the PTO for the purpose of following these groupings. Mr. Groody has confirmed in a telephone conversation between Mr. Groody and Mr. Scott that no more groupings need be sent.

In the interest of maintaining a clear record, Applicants respectfully traverse the Office Action's interview summary statement that an offer was made to terminally disclaim the present application with the '81 or '87 patents. Rather, Applicants respectfully submit that their offer was to disclaim a block of copending applications

against one another, provided their issue date was in close enough proximity so as not to result in unnecessarily great losses in patent term duration.

**B. Response to Rejections under 35 U.S.C § 112.**

**1. Introductory Remarks.**

Applicants have amended the pending claims in response to various of the Examiner's objections and queries. Applicants believe that all pending claims clearly define the metes and bounds of the claimed subject matter, and are supported by an adequate written description that is fully enabling. Applicants will address each paragraph of the Office Action regarding rejections and objections under 35 U.S.C. § 112.

Applicants respectfully request that paragraph 13's blanket rejection for indefiniteness and lack of enablement be withdrawn since the Examiner is under a duty to review all claims and provide specific reasoning in support of specific rejections. However, in order to advance the prosecution of the present application, Applicants shall provide a summary of the pertinent disclosure including reference to examples supporting the claimed subject matter. Applicants will provide citations to the '81 case supporting the pending claims, as well as a cross-reference to corresponding sections of the '87 specification (see footnotes *infra*). The present application asserts priority on the disclosure of the '81 case, filed on November 3, 1981, as Ser. No. 317,510, and issued September 15, 1987, as U.S. Pat. No. 4,694,490.<sup>1</sup> The disclosure of the '81 case is generally addressed to apparatus and methods for automatically controlling the transmission and presentation of information programming, including the application

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<sup>1</sup> The Examiner's attention is directed to the Information Disclosure Statements filed January 30, 1996, and April 5, 1996, which assert priority to the '81 case.



of embedded signaling for a number of functions, including the control over decryption and access, monitoring of usage/availability, control of external equipment, coordination of programming output including multiple broadcasts, automated compilation and collection of billing data, and generation and presentation of combined media presentations of broadcast and locally-generated or retrieved content. (U.S. Pat. No. 4,694,490, Abstract; col. 3 line 29 to col. 5 line 27). The priority disclosure further discusses coordination and control of programming at several levels of the communications chain, including transmission stations, intermediate transmission stations, and receiver stations.

Regarding the present application, the pending claims are generally directed at methods of processing signals at receiver stations, including methods drawn to the control of transmitter stations in the transmission of programming and signals further effective to control downstream receiver stations. Independent claim 3 is directed to a method of controlling operations in a system comprising at least one receiver station, including the storage of a television signal and an instruct signal effective to instruct a user station computer to supplement or complete the television programming at an output device. [See, e.g., U.S. Pat. No. 4,694,490, col. 3 line 48 to col. 4 line 30 (discussing the control of the presentation of stored programming); col. 13 line 1 to col. 15 line 25 (discussing signals which control decryption at a user station); col. 18 lines 8-29 (discussing the control of the presentation of television programming in conjunction with a stereo simulcast); col. 19 line 42 to col. 20 line 10 (discussing instruct signals that control the presentation of a program in conjunction with overlays); col. 11 at lines 50-65

(discussing control of a station to stored programming signals); col. 19 at lines 5-29 (discussing control of apparatus to record programming signals).<sup>2</sup>

Independent claim 8 is directed at a method of generating a control signal effective at a processor at a user station to generate or output information to supplement or complete a program, and storing the control signal with the program. [See, e.g., U.S. Pat. No. 4,694,490, col. 19 line 42 to col. 20 line 10 (discussing instruct signals effective at a processor to generate and output information that supplements or completes a program)].<sup>3</sup> Independent claim 13 is generally directed to a method of controlling operations in a system including at least one transmitter station and receiver station, including the application of instruct signals which are effective to control a transmitter station to transmit a signal and a receiver station to store or present information from the signal. The '81 case discloses the concepts of controlling transmission stations and receiver stations using instruct and control signals. [See e.g., U.S. Pat. No. 4,694,490 col. 10 line 14 to col. 12 line 67] (discussing automation of operations at a transmitter station using instruction and control signals); col. 17 line 34 to col. 18 line 7 (discussing instruct and control signals that cause a receiver station to

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<sup>2</sup> '490 col. 3 line 48 to col. 4 line 30 corresponds to '87 Specification at 11-14, 16, 40-43, 248, 427-429, 447-457, 463, 516-533; '490 col. 13 line 1 to col. 15 line 25 corresponds to '87 Specification at 278-312, 143-156, 197-246, 457-463; '490 col. 18 lines 8-29 corresponds to '87 Specification at 406-419 (see also 86-93, 162-193, 197-246, 272-278 and 312-324; '490 col. 19 line 42 to col. 20 line 10 corresponds to '87 Specification at 19-28 (see also 427-457, 249-267 [line 18], 288-312, and 86-248); '490 col. 11 at lines 50-65 corresponds to '87 Specification at pp. 324-390; '490 col. 19 at lines 5-29 corresponds to '87 Specification at 427-447.

<sup>3</sup> '490, col. 19 line 42 to col. 20 line 10 corresponds to '87 Specification at 19-28 (see also 427-457, 249-267 [line 18], 288-312, and 86-248).

control equipment, such as storage devices)]; col. 19 line 42 to col. 20 line 10 (discussing instruct signals effective at a receiver station to present information)].<sup>4</sup>

Independent claim 18 is directed at an apparatus for providing a mass medium programming presentation, including a storage device for storing mass medium programming and embedded instruct signals, and a processor for controlling the storage device and an output device to output mass medium program material in accordance with detected embedded instruct signals. [See e.g., U.S. Pat. No. 4,694,490 fig. 1, 5 and 6, as well as the cited disclosure re claims 3 and 8 *supra*].<sup>5</sup> Independent claim 19 is directed to a transmitter station apparatus, including a storage device for storing mass medium programming and instruct signals, and a computer for controlling the communication of instruct signals to the transmitter. [See e.g., U.S. Pat. No. 4,694,490 fig. 3A-3C; col. 10 line 14 to col. 12 line 67; col. 19 lines 5-29].<sup>6</sup>

Applicants provide these specific embodiments in support of the pending claims by way of example only. The claims must be read as broadly as is reasonable in light of the specification, and Applicants in no way intend that their submission of excerpts/examples to assist the PTO be construed to unnecessarily restrict the scope of the claimed subject matter. Applicants will provide additional specification support in

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<sup>4</sup>490 col. 10 line 14 to col. 12 line 67 corresponds to '87 Specification at pp. 324-390; '490 col. 17 line 34 to col. 18 line 7 corresponds to '87 Specification at 396-406; '490 col. 19 line 42 to col. 20 line 10 corresponds to '87 Specification at 19-28 (see also 427-457, 249-267 [line 18], 288-312, and 86-248).

<sup>5</sup>'490 fig. 1, 5 and 6 correspond to '87 Specification at fig. 1, 5 and 6.

<sup>6</sup>'490 col. 10 line 14 to col. 12 line 67 corresponds to '87 Specification at 37-278; '490 col. 19 at lines 5-29 corresponds to '87 Specification at 427-447.

their detailed response to the Examiner's specific rejections provided *infra* in section B(2).

## **2. Remarks and Argument in Response to Examiner's Specific Objections.**

Applicants respectfully submit that present claims 3-20, as they presently stand, comply with 35 U.S.C. § 112, second paragraph, insofar they particularly point out and claim the subject matter sufficiently for one of ordinary skill in the art to comprehend the bounds of the claimed invention. Applicants further submit that the pending claims comply with the written description and enablement requirements of 35 U.S.C. § 112, first paragraph. The test for definiteness of a claim is whether one skilled in the art would understand the bounds of the patent claim when read in light of the specification, and if the claims so read reasonably apprise those skilled in the art of the scope of the invention, no more is required. Credle v. Bond, 25 F.3d 1556, 30 U.S.P.Q.2d 1911 (Fed. Cir. 1994). The legal standard for definiteness is whether a claim reasonably apprises those of skill in the art of its scope. In re Warmerdam, 33 F.3d 1354, 31 U.S.P.Q.2d 1754 (Fed. Cir. 1994). The written description requirement of 35 U.S.C. § 112, first paragraph, requires that the disclosure allow persons of ordinary skill in the art to recognize that applicant invented what is claimed. Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 19 U.S.P.Q.2d 1111 (Fed. Cir. 1991). The enablement requirement of 35 U.S.C. § 112, first paragraph, is met if the description enables any mode of making and using the claimed invention. Engel Industries, Inc. v. Lockformer Co., 946 F.2d 1526, 20 U.S.P.Q.2d 1300 (Fed. Cir. 1991). The disclosure of the priority document, U.S. Patent No. 4,694,490 (hereinafter the '81 case), filed November 3, 1981, and issued on

September 15, 1987, relates to a system and methods for automatically controlling programming transmissions and presentation, including the use of control and information signals, within programming transmissions, that are detected, processed and stored for transfer to remote sites. (U.S. Pat. No. 4,694,490, Abstract). Applicants have amended the pending claims to enhance clarity and respectfully submit that said claims are adequately described and fully enabled by the specification, and furthermore, distinctly delineate the metes and bounds of the claimed subject matter. Applicants will address the Examiner's particular objections and questions *infra* where amendment does not clearly resolve the issue or where explanation or argument is otherwise necessary.

Paragraph 13 of the Office Action was addressed in section B(1) *supra*. Regarding paragraphs 14 and 15, Applicants have amended the claims to address the Examiner's specific concerns here. Applicants believe their amendment to the various claims to which the Examiner refers should resolve any issues of indefiniteness. Applicants respectfully request that the rejections under paragraph 14 and 15 be withdrawn.

Regarding the rejection of claims 4, 11 and 14 under par. 16 of the Office Action, Applicants initially submit that the rejection is improper. The rejection purports to reject claims 4 and 11 under 35 U.S.C. § 112, first "and/or" second paragraphs. As Applicants discussed in section B(1) *supra*, the Examiner must make and articulate his rejections with specificity. Applicants respectfully submit that this "and in the alternative"-type rejection is improper, and thus should be withdrawn. Applicants read the rejection as under 35 U.S.C. § 112, first paragraph, "and if not, then in the alternative

under” 35 U.S.C. § 112, second paragraph. While alternative legal theories may be permissible in court pleadings, Applicants respectfully submit that they are not a proper form of rejection in a patent examination. Even assuming *arguendo* the rejection is proper, Applicants shall demonstrate that the claimed subject matter is fully compliant with the requirements of paragraphs one and two of 35 U.S.C. § 112. Regarding the term “separately defined”, Applicants have deleted the term, with the view that it is redundant given that a digital television signal is, by definition, “separately defined” from a standard analog television signal. Nevertheless, for the purposes of support for claims 4 and 11, digital detector 38 of the TV signal decoder of Figure 2A receives a “separately defined” transmission of the base band signal of the television channel signal of the frequency of interest (col. 6, line 67 to col. 7, line 1). Certainly one of ordinary skill in the art would be familiar with conventional analog television transmissions, such as the six (6) MHz bandwidth NTSC format signals that are conventional in the United States. And certainly one of ordinary skill would further appreciate the concept of a television signal that is “separately defined”--of a different format--than such conventional analog signals. Therefore, clearly one of ordinary skill would appreciate the scope of the claimed subject matter. Applicants respectfully submit that the disclosure supports the concept of a separately defined television signal and that claims 4 and 11 clearly stake out the metes and bounds of the subject matter. As such, Applicants respectfully request the Examiner to withdraw the rejection.

Regarding par. 17 and 18 of the Office Action, objecting to the specification and rejecting claims 4, 11 and 14, respectively, under 35 U.S.C. § 112, first paragraph,

Applicants respectfully submit the priority disclosure fully supports the concept of "digital television" signals. In 1981, both analog television and digital television were well-known to those having ordinary skill in the art. From column 13, line 1 to column 14, line 62, the '81 case discloses the use of encryption to govern the reception of programming. Encryption is "a process for enciphering or encoding data to prevent illicit entry into a system." *Webster's II, New College Dictionary*, 1995. To encode is "to convert (a character) into an equivalent combination of bits." *Id.* Thus, encryption is a process for converting data into an equivalent combination of digits to prevent illicit entry into a system. From column 13, line 68 to column 14, line 4, the '81 case explicitly discloses that:

"A decrypter does not necessarily decrypt the entire transmission. Encrypted transmissions may be only partially encrypted. For example, only the video portion of the transmission may be encrypted. The audio portion may remain unencrypted."

Since throughout the '81 case it is disclosed that programming transmissions may be of television, it is submitted that the cited passage discloses that television programming transmissions (i) include a video portion and an audio portion, and (ii) may be either entirely encrypted or partially encrypted. Since encrypting a television programming transmission involves "convert[ing] (a [television programming transmission]) into an equivalent combination of bits," clearly the '81 case discloses "digital television."

Further, the '81 case discloses that "[m]icrocomputer, 205, is preprogrammed to respond to . . . instruction signals embedded in the "Wall Street Week" program[m]ing transmission . . . [that] instruct microcomputer, 205, to generate several graphic video

overlays." (col. 19, lines 42-49). These instruction are embedded in *digital* form into the television programming ("Wall Street Week") by *encoding* means (col. 9, lines 31-33). Thus, the television programming transmission is disclosed as containing embedded, encoded digital signals that generate television programming. The '81 case discloses the television programming transmission including digital signals and, thus, being "digital television."

At column 6, lines 22- 68, column 7, lines 1-5, it is disclosed that a television programming transmission is received at the signal processor of Figure 1. A particular frequency of the television programming transmissions is selected and passed to the TV signal decoder of Figure 2A. At the TV signal decoder, the selected frequency of the programming transmission is then transmitted through paths A, B and C to three separate digital detector devices, 34, 37 and 38 ,that are designed to act on particular frequency ranges in which *encoded* signal information may be found. Digital detector 34 decodes *encoded* signal information in the line portion or portions of the analog video portion of the television programming transmission. Likewise, digital detector 37 determines whether a particular encoded signal is present in the audio portion of the television programming transmission. Digital detector 38 receives a separately defined, and clearly digital, transmission. Since paths A and B carry the video and audio portions, of the television transmission, respectively, the separately defined portion is at least some of that which remains in the television programming transmission. Since the television programming transmission is disclosed to be comprised of a video portion, an audio portion and embedded encoded digital signals, the separately defined



transmission is at least some of the television programming transmission that contains the encoded digital signals. Thus, it is disclosed that the audio portion, video portion and signal portion of the television programming transmission may be entirely or partially encoded in digital format, separately defined from analog format, thereby comprising "digital television."<sup>7</sup> Regarding the terms "digital video" and "digital television", Applicants do not use the terms interchangeably in the claims. As one of ordinary skill would appreciate, the term "digital television" applies to television programming or content that has been digitized, and includes its constituent digitized video and audio. "Digital video", on the other hand, refers specifically to a video image or plurality of images that have been digitally encoded. As one of ordinary skill in the art would appreciate, digital video may be a constituent part of a digital television signal, or may be completely independent thereof. In summary, Applicants respectfully submit the disclosure is fully enabling regarding the methods as applied to digital video

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<sup>7</sup> The Examiner appears to specifically request support for the concept of digital television in the '87 case as well, although as noted, Applicants assert priority back to the '81 case. The '87 case, U.S. Pat. No. 4,965,825, filed September 11, 1987, and issued on October 23, 1990, adequately discloses and defines the term "digital television". The '87 case references digital television a number of times, including the following:

"encryption and decryption means and methods can regulate . . . digital video and audio television transmissions" (Specification, p. 279); "the program originating studio . . . transmits a television show that consists of so-called digital video and digital audio, well known in the art" (Specification, p. 288); "encrypted digital video" (Specification, p. 299); "program originating studio ceases transmitting a television signal of digital video and digital audio" (Specification, p. 300); "receiving . . . television information of said cable channel 13 as digital video and audio" (Specification, p. 302).

Applicants respectfully submit that the disclosure of the '87 case makes clear that "digital television" transmissions or information streams include the constituent digital video and digital audio. As is clear from the above specification references, Applicants do not use the terms "digital television" and "digital video" interchangeably. Applicants reiterate that the meaning of the terms "digital television" and "digital video" would have been understood by one of ordinary skill in the art and, furthermore, that the priority specification adequately describes and defines the terms to enable the inventions as claimed.

and television signals; as such, Applicants respectfully request the objection to the specification and rejection of claims 4, 11, and 14 be withdrawn.

Regarding the Examiner's query in paragraph 19 of the Office Action, Applicants submit that the '81 priority case is provides adequate support for the identified claim term and concept of transmission of embedded signals with processor code or instructions that control operations at a computer or processor. Webster's II New College dictionary defines code as "a set of symbols and rules to represent *instructions* to a computer". (emphasis added). The priority disclosure is replete with references to the concept of transmission of code or instructions to control the operation of computers or processors. Col. 11 lines 4-7 states that "signal processor, 71, has means, discussed above, to identify and separate instructions and information signals".<sup>8</sup> The discussion beginning at col. 19, line 41, begins with "microcomputer, 205, is preprogrammed to respond . . . to instruction signals".<sup>9</sup> Col. 5 lines 18-20 states that "programmable random access memory . . . permits revision of operator patterns and instructions".<sup>10</sup> The ensuing discussion of the "Wall Street Week" scenario addresses the transmission of code or instructions which are executed at the receiver site. (U.S. Pat. No. 4,694,490 col. 19 line 30 to col. 20 line 10)<sup>11</sup> Applicants respectfully submit that the priority disclosure provides support for the claimed element of code or instructions.

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<sup>8</sup> '490 col. 11 lines 4-7 corresponds to '87 Specification at pp. 15 lines 7-12 and 22 lines 9-19.

<sup>9</sup> '490 col. 19 line 41 corresponds to '87 Specification at pp. 447-457.

<sup>10</sup> '490 col. 5 lines 18-20 correspond to '87 Specification at pp. 15-16, 37-40.

<sup>11</sup> '490 col. 19 line 30 to col. 20 line 10 corresponds to '87 Specification at pp. 447-457, 19-28; see also 427-447, 249-267 (line 18), 288-312, and 86-248.

Regarding the rejection of claims 6, 11 and 15 under 35 U.S.C. § 112 for indefiniteness, Applicants have amended the claims to address the various informalities identified by the Examiner.

### **3. Summary**

Applicants have amended various of the remaining pending claims to enhance clarity and address the Examiner's various objections and rejections. Applicants believe said amendments and the associated remarks overcome the Examiners various rejections under 35 U.S.C. § 112, first and second paragraphs. Applicants respectfully submit that the subject matter of said claims is adequately described and fully enabled by the priority specification, and that the claims clearly stake out the metes and bounds of the subject matter regarded as the invention. As such, Applicants respectfully request the Examiner to withdraw all present objections and rejections and allow all present claims.

**C. Response to Rejections under the Doctrine of Nonstatutory Obviousness-Type Double Patenting.**

**1. Introductory Remarks.**

The Office Action rejects claims 9 and 10 under the doctrine of nonstatutory obviousness-type double patenting over claims 1-13 of U.S. Pat. No. 4,694,490. The test for obviousness-type double patenting is whether the claimed invention from the second [application] would have been obvious from the subject matter of the first patent, in light of the prior art. In re Longi, 759 F.2d 887, 892, 225 USPQ 645, 648 (Fed. Cir. 1985). Obviousness-type double patenting is addressed to the situation where the claims in the two applications or patents are not drawn precisely to the same invention, but were drawn to inventions so very much alike as to render one obvious in view of the other and to effectively extend the life of the patent that would have the earlier of the two issue dates. Gerber Garment Technology, Inc. v. Lectra System, Inc., 916 F.2d 683, 16 USPQ2d 1436 (Fed. Cir. 1990). The PTO may reject a claim for obviousness-type double patenting only if it adduces clear evidence as to why the variation would have been obvious. In re Kaplin, 789 F.2d 1574, 229 USPQ 678 (Fed. Cir. 1986). The test is whether any claim in the application defines merely an obvious variation of an invention disclosed and claimed in the patent. Id. Double patenting is considered on a claim-by-claim basis. Ortho Pharmaceutical Corp. v. Smith, 959 F.2d 936, 22 USPQ2d 1119 (Fed. Cir. 1992). The disclosure of a patent cited in support of a double patenting rejection cannot be used as though it were prior art, even where the disclosure is found in the claims. General Foods Corp. v. Studiengesellschaft Kohle mbH, 972 F.2d 1272, 23 USPQ2d 1839 (Fed. Cir. 1992). The fact that it may be desirable to use both inventions

in the same commercial process does not result, however, in any recognized form of double patenting, or in the “extension” of either patent; each patent has a term of seventeen years. Id. MPEP § 804 states that the determination of obviousness for double patenting purposes should follow the traditional strictures of the four-part Graham test for obviousness under 35 U.S.C. § 103, including determination of (1) scope and content of patented claims, (2) differences between the claims at issue and scope and content of the applied claims, (3) level of ordinary skill in the pertinent art, and (4) any objective indicia of nonobviousness. MPEP § 804 at p. 800-17 also states that the rejection should “make clear” the (1) differences between the conflicting claims and (2) reasons why one of ordinary skill would conclude the invention in the application’s claim is an obvious variation of the patented claim’s invention.

The Office Action rejects present claims 9 and 10 over U.S. Pat. No. 4,694,490 Patent claims 1-13. The Court of Appeals has held in Ortho Pharmaceutical Corp. v. Smith, 959 F.2d 936, 22 USPQ2d 1119 (Fed. Cir. 1992) that double patenting must be analyzed on a claim-by-claim basis. MPEP § 804 requires the Examiner to clearly state the differences between conflicting claims. Therefore, Applicants must presume that the Examiner’s double patenting rejection is over each and every patent claim of U.S. 4,694,490, although the Office Action does not appear to separately analyze each of the thirteen patent claims, but analyzes them in the aggregate, tied together. Applicants will respond to the generalized rejection over the issued patent by specifically demonstrating the nonobviousness of the present claims with respect to the claimed subject matter of claim 1 of issued U.S. Pat. No. 4,694,490. Applicants shall demonstrate

the clear differences between the present and issued claim, such that the application claims *do not* merely define an obvious variation of the invention claimed in the patent.

Claim 1 of U.S. Pat. No. 4,694,490 is directed to a method of communicating television program material to a multiplicity of receiver stations which have computers adapted to cause the display of user specific information, and includes the elements of (1) "transmitting a video signal containing a television program signal" and "receiving said video signal . . . and displaying said program material on video receivers", (2) "transmitting an instruct-to-overlay signal to said receiver stations [when] the corresponding overlay is not being displayed", (3) "detecting . . . the instruct-to-overlay signal and coupling said instruct-to-overlay signal to the computers" and (4) "causing [the] computers to generate and transmit their overlay signals . . . thereby to present to display . . . the television program material and related computer generated overlay, the overlays . . . being different , with each display specific to a specific user". Patent claim 1 is thus directed at a method whereby transmitted instruct signals cause receiver stations to generate and output user specific, program related overlay content to supplement a received television program signal.

Present claim 9 depends from present claim 8, which recites "a method of generating and encoding signals to control a presentation", and includes the elements of (1) "receiving and storing a program that contains video information", (2) "receiving an instruction [with the] effect to instruct a user station processor to generate or output information to supplement or complete said program", (3) "encoding said instruction [by] translating said instruction to a first control signal", and (4) "storing said first

control signal in conjunction with said program". Amended claim 8, therefore, is directed to a method of assembling a storage device or medium containing a program and control signal, the control signals being effective to cause a processor to generate or output information that will supplement or complete the program. Present claim 9 provides the further limitation that the control signal causes the processor to generate a video overlay based on some supplemental material that is stored at the same location as the processor, and the further step of storing a second control signal in conjunction with the program and (first) control signal, the second control signal effective at a user station to query a remote station for the supplemental material or to receive the supplemental material in a broadcast/cablecast transmission.

Applicants respectfully submit that the subject matter of amended claim 9 is not an obvious variation of the invention of patent claim 1. In fact, Applicants submit that independent claim 8, upon which claim 9 depends, is nonobvious over patent claim 1. If independent claim 8 is nonobvious over patent claim 1 then it follows, *a fortiori*, that dependent claim 9 (and claim 10) are nonobvious over patent claim 1. Patent claim 1 is directed at the generation of user specific overlays at receiver stations using transmitted instruct-to-overlay signals and transmitted video signals, which are processed and presented *upon receipt*. Upon receiving the video signal, it is displayed. Upon receiving the instruct-to-overlay signal, it is effective at receiver station computers to generate and transmit overlay signals. In contrast, amended claim 8 provides for the storing of a program and a control signal together on a storage device or media for *subsequent* processing and presentation at a user station with a processor. Patent claim 1 clearly

does not disclose, suggest or imply (1) storing a program that contains video information. Nor does patent claim 1 disclose, suggest or imply (3) encoding a received instruction to translate it to a control signal effective at a processor to generate or output information to supplement or complete the program. Nor does patent claim 1 disclose, suggest or imply (4) storing the program and control signal together. Applicants respectfully submit that the subject matter of present claim 8, and accordingly, claims 9 and 10, is not taught, suggested or implied by patent claim 1. One of ordinary skill in the art would not have considered the present claims to be an obvious modification of patent claim 1. The present claims are nonobvious over the patent claims and, as such, are not the proper object of a double patenting rejection.

As noted, dependent claim 9 contains the additional element of a second control signal, stored with the program and (first) control signal, which is effective at a user station to query a remote station or receive supplemental material in a broadcast/cablecast transmission. The subject matter of patent claim 1 clearly does not disclose, suggest or imply a second control signal with said effects. The patent claim recites one signal, which is effective to generate and transmit overlay signals. But this one signal is not stored. Nor is it effective to cause a user station to query a remote station or receive supplemental material in a transmission. Nor is it stored with a program and (first) control signal. Applicants respectfully submit that the patent claim does not teach or suggest the subject matter of claim 9, including the aforementioned elements. Applicants respectfully submit that present claim 9 is clearly patentably



distinguishable over the cited patent. Applicants request that the rejection be withdrawn.

Dependent claim 10 is dependent upon independent claim 9, and includes the further limitation that the control signal causes a video overlay, and further comprises one step of: (1) "transmitting a combined video signal based on said program and said video overlay . . . over a broadcast or cablecast network to a plurality of receiver stations", and (2) "transmitting a combined video signal . . . to a co-located display". The first alternative step, therefore, provides that the control signal causes an overlay at an "upstream" site, which further transmits the combined video signal to downstream multiple receiver stations. The second alternative step provides that the control signal causes the overlay, and combined presentation, at the site where it is to be viewed, on a co-located display. Patent claim 1 does not disclose or suggest transmitting a combined video signal including video overlays over a network to a plurality of receiver stations. The elements recited in patent claim 1 clearly define an invention whereby each overlay is generated locally, and displayed locally. The overlays are not further transmitted over a network. Applicants respectfully submit that the subject matter of present claim 10 is not an obvious variation of patent claim 1. Applicants respectfully request that the double patenting rejection be withdrawn.

Regarding the Examiner's specific comments, it is asserted that "although the conflicting claims are not identical, they are not patentably distinct from each other because applicants [sic] patent claims are directed to generating overlay signals in response to receiving an instruction signal. . . The same concept is recited in claims 9

and 10. . . The patent claims display those overlay signals after they are transmitted. The application claims transmit similar information". (Office Action, p. 21 at par. 20). Applicants respectfully submit that Examiner's observation that amended claims 9 and 10, as well as patent claim 1, relate to the concept of video overlay signals and instruct signals, does not mean the conflicting claims are obvious over each other. The test for nonstatutory obviousness-type double patenting is whether the subject matter of the claims would be obvious in light of the patent claims, not whether the conflicting claims merely address some common concepts<sup>12</sup>. Patent claim 1 is directed to a method for causing video overlays using transmitted instruct signals. Amended claim 9 is directed to subject matter that is patentability distinct over patent claim 1. Amended claim 9 is directed to *storing*, together, the program and control signal that will *subsequently* be effective at a user station processor to generate supplemental information to supplement the program. Furthermore, the storage of the program and control signal recited in the claims clearly need not occur at a receiver station; in fact, the step of encoding the instruction clearly indicates that operation does not occur at the receiver station. Amended claim 9 further provides for a second control signal that causes the

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<sup>12</sup> If the test were "common concepts", then every claim of every inventor's continuation application could, no doubt, be rejected over pending or issued claims since they will, in most cases, share some "common concepts". The test is whether the subject matter of the claim at issue, as a whole, would have been obvious over the patent claims. That the Examiner has improperly applied the double patenting obviousness test is demonstrated by the fact that the Examiner implicitly finds independent claim 8, upon which claims 9 and 10 depend, patentably distinct over the issued patent. If the independent claim is patentable over the issued patent claims, then dependent claims thereon must be patentably distinct over the issued patent since they, of course, contain every limitation of the former. That the Examiner implicitly finds independent claim 8 patentably distinct over the patent claims, but dependent claims 9 and 10 not patentably distinct bolster's Applicants' assertion that the Examiner has *not* evaluated the whole subject matter of the present claims against the patent claims. Instead, he has focused on common phrases or words--"common concepts"--found in the dependent claims to form the basis for an improper double patenting rejection.

user station to contact a remote station for supplemental material (forming the basis of the supplemental or completion information) or to receive the supplemental material in a broadcast/cablecast transmission. Patent claim 1 does not disclose or even remotely suggest a second control signal with said functionality at a user station, much less that is stored together with the program and other control signal. In summary, Applicants respectfully request that the rejection of claims 9 and 10 for double patenting obviousness-type be withdrawn.

**D. Response to Rejections under 35 U.S.C. § 102 for Lack of Novelty.**

**1. Introduction and Applicable Law.**

The claims of the present application have been amended to further clarify the claimed invention. It is respectfully submitted that the claims in the present application should be allowed because these methods are not disclosed, taught, suggested, or implied by the applied art. For a prior art reference to anticipate in terms of 35 U.S.C. §102, every element of the claimed invention must be identically shown in a single reference. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. Scripps Clinic & Research Foundation v. Genetech, Inc., 927 F.2d 1565, 18 U.S.P.Q.2d 1001, 18 U.S.P.Q.2d 1896 (Fed. Cir. 1991). Absence from a cited reference of any element of a claim negates anticipation of that claim by the reference. Kloster Speedsteel AB v Crucible, Inc., 230 U.S.P.Q. 81 (Fed. Cir. 1986), on rehearing, 231 U.S.P.Q. 160 (Fed. Cir. 1986).

Appellants will further submit that the subject matter of these claims nonobvious since it is nowhere disclosed, taught, suggested or implied by the cited art. The Examiner meets the burden of establishing a *prima facie* case of obviousness when the teachings of the prior art itself would have suggested the claimed subject matter to a person of ordinary skill in the art. In re Rijckaert, 9 F.3d 1531, 28 U.S.P.Q.2d 1955 (Fed. Cir. 1993). The mere fact that the prior art may be modified in the manner suggested by the examiner does not make the modification obvious unless the prior art suggests the

desirability of the modification. In re Fitch, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992).

**2. Rejections for Anticipation by Jeffers, et. al., U.S. Pat. No. 4,739,510.**

The Office Action rejections pending claims 3-17 under 35 U.S.C. § 102(e) as anticipated by Jeffers, et. al., U.S. Pat. No. 4,739,510 (hereinafter Jeffers). (Office Action, p. 22, par. 22). Applicants respectfully traverse the objection since the cited art is not prior art against the present application under 35 U.S.C. § 102. The asserted priority date of the present application, as discussed in section A *supra*, is November 3, 1981. The cited art has an issue date of April 19, 1988, an actual file date of April 2, 1987, and an effective file date of May 1, 1985, based on the continuation from the abandoned original application. As such, the cited art is not effective prior art against the present application and, therefore, Applicants respectfully request that the rejection of claims 3-17 be withdrawn.

**3. Rejection of Claims 18-20 as Anticipated under 35 U.S.C. § 102(b) by Pargue, Jr., U.S. Pat. No. 4,422,093**

Paragraph 23 of the Office Action rejects claims 18-20 under 35 U.S.C. § 102(b) as anticipated by Pargue, Jr., U.S. Pat. No. 4,422,093 (hereinafter Pargue). As an initial matter, Applicants submit that the applied reference is not prior art against the present application under 35 U.S. § 102(b). In this instance, the U.S. issue date of the reference is

December 20, 1983, subsequent to the critical date of the present application, November 3, 1980. Applicants respectfully request the rejection of all claims under 35 U.S.C. § 102(b) be withdrawn and the claims allowed.

Even assuming *arguendo* that Pargee is prior art against the present application, Applicants respectfully submit that the reference does not anticipate claims 18-20 because each claimed invention contains at least one element that is absent from the reference. Pargee's "Television Burst Service" is directed to a video data service wherein a user chooses still picture frames of interest (from, for example, a catalogue) and makes his request to a central transmission station. (Pargee, Abstract). The central transmission station then assembles received requests contiguously for transmission to (multiple) users in a "burst" of frames. (Pargee, Abstract). The frames are received and stored at the user's location for viewing as desired. (Pargee, Abstract). A vertical interval code may be inserted into each frame for frame identification purposes at the user station. (Pargee, Abstract). The burst sequence is stored at the user station where a "table of contents" or "automatic code selection" will enable him to select his requested frames out of potentially many frames (unrelated to his request) in the burst. (Pargee, col. 1 line 64 to col. 2 line 3). The user station requests are made telephonically to the originating station, each request containing a user ID and frame selection ID. (Pargee, col. 2 at lines 28-45). Each user request is processed by central controller 1 to actuate the proper video tape reproducer 3-n to select and output the proper frame on the proper reel, a series of requests being selected from multiple VTR's for formatting into a single burst. (Pargee, col. 2 lines 59-68). Central controller 1 is connected to transmission

equipment 9 by control/status lines 10 for controlling the transmission of the assembled, stored burst from tape assembler 8. (Pargée, col. 3 lines 30-35). Central controller 1 has processor 14 with programming instructions, stored on floppy disk 18 and loaded into RAM 19, containing the operational program as well as the cross-reference data between frame selection ID's and reel and frame numbers on multiple reproducers 3-n. Video cassette recorder 41 at the user station of fig. 3 records the entire burst. (Pargée, col. 6 lines 3-18). A user's selection (time and frame ID) will either be manually or automatically entered into user station local controller 43, which will record the burst accordingly. (Pargée, col. 6 lines 45-55). Upon selection via local controller 43, then VTR 41 will be controlled to play until the proper frame ID data is detected, whereupon the selected frame will be displayed at TV display 44. (Pargée, col. 6 lines 45-55).

Amended claim 18 relates to an apparatus for providing a mass medium programming presentation, and includes (1) "an output device for outputting a mass medium programming presentation to a user", (2) "a storage device operatively connected to said output device for storing . . . mass medium program materials and . . . embedded instruct signals effective at the apparatus to supplement or complete said mass medium program materials based on stored data", (3) "a detector operatively connected to said storage device for detecting [the] instruct signals", (4) "a processor operatively connected to said storage device, said output device, and said detector [to control] said storage device and output device to output mass medium program

materials and the supplemental or completion information in accordance with said embedded instruct signals".

Applicants respectfully submit that the invention of claim 18 is not anticipated since it contains an element not disclosed or even suggested by Pargée: embedded instruct signals which cause the processor to output information, based on stored data, to supplement or complete the mass medium program materials. As discussed in the reference summary *supra*, Pargée does disclose still frame ID's embedded in the vertical interval which are processed by local controller 43 in order to output the proper selected still frames to TV display 44. However, still frames ID's do not cause a processor to output information to supplement or complete the program materials; they simply are processed to allow the local controller to output the correct frame. Still frames ID's can be used by video character generator 54 to generate an overlay of the page number, but this does not equate to or suggest the far more ambitious element of generating or outputting supplemental or completion material, based on locally stored data, that supplements or completes the programming. The cited art clearly does not disclose or suggest the output of such material, much less the output of such material based on locally stored data. In summary, Applicants respectfully submit that the apparatus of claim 18 for providing a presentation of mass medium material and locally generated, supplemental or completion material is nowhere disclosed, taught, suggested or implied by the applied reference. Applicants respectfully request that the rejection be withdrawn.



Application claim 19 relates to a transmitter station apparatus, and includes (1) "a transmitter for transmitting a mass medium programming signal", (2) "a storage device operatively connected to said transmitter for storing and outputting mass medium program materials [and] instruct signals effective at a receiver station apparatus to supplement or complete said mass medium program materials based on stored data", (3) "a detector operatively connected to said storage device for detecting [the] instruct signals", and (4) "a computer . . . for controlling the communication of [the] instruct signals from said storage device to said transmitter". Applicants respectfully submit that amended claim 19 not anticipated by the cited art since it contains elements not disclosed by the reference. Pargée does not disclose, or even imply, instruct signals of the recited functionality. The Examiner is directed to the argument pertaining to the instruct signals of claim 18 *supra*. Further, Pargée does not disclose a detector *located at the transmitter station* for detecting instruct signals. Central transmission station 1 of Pargée generates frame ID signals, but it does not detect instruct signals. The invention of claim 19 provides for the transmission station apparatus to detect and store instruct signals which are further effective at a receiver station apparatus to output supplemental or completion material based on stored data. There is no disclosure, or even suggestion, of this element in the cited reference. Since the cited art clearly fails to contain, or even suggest, the aforementioned elements of claim 19, Applicants respectfully submit that the claim is patentable over the art and, as such, request the rejection be withdrawn.

Regarding amended claim 20, Applicants submit this claim, as dependent upon claim 19, is likewise patentable over the cited art.

#### **4. Summary**

Applicants respectfully submit that they have overcome all rejections for lack of novelty. Applicants have amended the claims to enhance clarity, and respectfully submit the rejected claims are now in a condition for allowance. Applicants, therefore, respectfully request that the rejections under 35 U.S.C. § 102 be withdrawn and the claims permitted to issue

**E. Response To Rejection Based On MPEP Section 804 (II)(B)(2)**

As to the Office Action's rejection of Applicants' claim under a non-statutory non-obvious type of double patenting, Applicants strongly traverse the Examiner's double patenting rejection on three separate grounds which are set forth in the reply brief for Serial No. 08/113,329 (Atty. Docket No. 05634.008), incorporated herein by reference. For the sake of brevity, these arguments will not be set forth herein; the Examiner is respectfully directed to the above-mentioned reply brief.

The claims in the present application are distinct from the claims in the Harvey patents. As previously mentioned, the Office Action states that the independent and distinct standard was the main factor in the Schneller court's determination that the double patenting rejection should be affirmed. The Office Action has misinterpreted this phrase. This phrase means independent 'or' distinct. MPEP (6th ed.) § 802.01. The MPEP defines independent as meaning "that there is no disclosed relationship between the two or more subjects disclosed" and that they are not connected. The MPEP defines the term distinct as meaning that "two or more subjects disclosed are related . . . but are capable of separate manufacture, use, or sale as claimed . . . ." Two or more subjects cannot then be unrelated, independent, and also related, and thus distinct. Analyzing the PTO's cited representative claims referenced in the Office Action, the claims of the present application are clearly distinct from the claims in the patents and therefore the claims in the present application are patentable. Although not required, Applicants will analyze the claims of the present application with respect to the designated

representative claims of Harvey U.S. Patents 4,694,490; 4,704,725; 4,965,825 and 5,109,414.

**i. First representative claims, U.S. patent 4,694,490, claim 7 covering present application claim 8.**

Patent 4,694,490, claim 7 claims a method of communicating television program material, said material including a video signal containing a television program and an instruct-to-overlay signal, to multiple receiver stations. The video signal is received and the instruct-to-overlay signal detected and processed by a computer. The computer generates and transmits its overlay video signals to a television receiver which presents a combined display of the television program and overlay video signals, said display specific to a specific user. Present application claim 8 relates to a method of generating and encoding signals to control a presentation, including receiving a program containing video, receiving and encoding into a control signal an instruction effective to instruct a user station processor to generate or output program supplement or completion information, and storing the control signal in conjunction with the program. Patent claim 7 does not disclose the element of storing a program with video, much less storing a control signal in conjunction with the stored video information. Patent claim 7 does not disclose the concept of encoding an instruct signal to translate it to a control signal. Patent claim 7 does not cover the subject matter of application claim 8. The two claims are capable of separate manufacture, use, and sale as claimed. These two inventions are distinct.

<b>U.S. patent 4,694,490, claim 7</b>	<b>Present application claim 8 (amended)</b>
In a method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay video	8. (Amended) A method of generating and encoding signals to control a presentation comprising the steps of: receiving and storing a program that contains video information; receiving an instruction, said

signals, to their associated television receivers, said overlay signals causing the display of user specific information related to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay video signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, and wherein a video signal containing a television program signal and an instruct-to-overlay signal are transmitted to said receiver stations, the steps of:

receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations

detecting the presence of said instruct-to-overlay signal at said selected receiver stations at a time when the corresponding overlay is not being displayed, and coupling said instruct-to-overlay signal to the computers at said selected receiver stations, and

causing the computers at said selected receiver stations to generate and transmit their overlay video signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a combined display at the selected receiver stations consisting of the television program and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.

instruction having effect to instruct a user station processor to generate or output information to supplement or complete said program;

encoding said instruction, said step of encoding translating said instruction to a first control signal with said effect; and storing said first control signal in conjunction with said program.

- ii. Second representative claims, U.S. patent 4,704,725, claim 3 covering present application claim 8.

Patent 4,704,725, claim 3 claims a method of communicating output signals comprising data and user specific signals at a multiplicity of receiver stations from computers to output devices. At least some of the computers can modify the user specific signals by processing modification control signals. The computers communicate the data and user specific signals in response to a received and detected instruct-to-transmit signal. Present application claim 8 relates to a method of generating and encoding signals to control a presentation, including receiving a program containing video, receiving and encoding into a control signal an instruction effective to instruct a user station processor to generate or output program supplement or completion information, and storing the control signal in conjunction with the program. Patent claim 3 does not disclose the element of storing a program with video, much less storing a control signal in conjunction with the stored video information. Patent claim 3 does not disclose the concept of encoding an instruct signal to translate it to a control signal. Patent claim 3 does not cover the subject matter of application claim 8. The two claims are capable of separate manufacture, use, and sale as claimed. These two inventions are distinct.

U.S. patent 4,704,725, claim 3	Present application claim 8 (Amended)
<p>A method of communicating data to a multiplicity of receiver stations each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify the user specific signals transmitted to their</p>	<p>8. (Amended) A method of generating and encoding signals to control a presentation comprising the steps of:  receiving and storing a program that contains video information;  receiving an instruction, said instruction having effect to instruct a user station processor to generate or output information to supplement or complete</p>

associated output devices, each of said computers being programmed to accommodate a special user application, comprising the steps of:

transmitting an instruct-to-transmit signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device;

detecting the presence of said instruct-to-transmit signal at selected receiver stations and coupling said instruct-to-transmit signal to the computers associated with said selected stations, and

causing said last named computers to generate and transmit their user specific signals to their associated output devices in response to said instruct-to-transmit signal, thereby to transmit to the selected output devices an output signal comprising said data and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.

said program;

encoding said instruction, said step of encoding translating said instruction to a first control signal with said effect; and

storing said first control signal in conjunction with said program.

**iii. Third representative claims, U.S. patent 4,965,825, claim 24 covering present application claim 8.**

Patent 4,965,825, claim 24 claims a method of generating user specific output information at a multiplicity of receiver stations. Each receiver station is programmed with a special user application and has a computer adapted to generate user specific output information. Each receiver station has an output device to which its computer transmits a user specific signal. At a time when the user specific output information does not exist, an instruct-to-generate signal is transmitted to the receiver stations. In response to the instruct-to-generate signal, the computers generate and transmit to the output devices the user specific output information in user specific signals which are different, "with each output signal specific to a specific user". Present application claim

8 relates to a method of generating and encoding signals to control a presentation, including receiving a program containing video, receiving and encoding into a control signal an instruction effective to instruct a user station processor to generate or output program supplement or completion information, and storing the control signal in conjunction with the program. Patent claim 24 does not disclose the element of storing a program with video, much less storing a control signal in conjunction with the stored video information. Patent claim 24 does not disclose the concept of encoding an instruct signal to translate it to a control signal. Patent claim 24 does not cover the subject matter of application claim 8. The two claims are capable of separate manufacture, use, and sale as claimed. These two inventions are distinct.

U.S. patent 4,965,825, claim 24	Present application claim 8 (Amended)
<p>In a method of generating computer output at a multiplicity of receiver stations each of which includes a computer adapted to generate and transmit user specific output information content and user specific signals to one or more associated output devices, with at least one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify said computers' method of processing data and generating output information content, each of said computers, being programmed to accommodate a special user application, the steps of:</p> <p>transmitting an instruct-to-generate signal to said computers at a time when corresponding user specific output information content does not exist, and</p>	<p>8. (Amended) A method of generating and encoding signals to control a presentation comprising the steps of:</p> <p>receiving and storing a program that contains video information;</p> <p>receiving an instruction, said instruction having effect to instruct a user station processor to generate or output information to supplement or complete said program;</p> <p>encoding said instruction, said step of encoding translating said instruction to a first control signal with said effect; and</p> <p>storing said first control signal in conjunction with said program.</p>



causing said last named computers to generate their user specific output information content in response to said instruct-to-generate signal, thereby to transmit to each of their associated output devices an output information content and the user specific signal of its associated computer, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.

**iv. Fourth representative claims, U.S. patent 5,109,414, claim 15 covering present application claim 8.**

Patent 5,109,414, claim 15 claims a signal processing system which receives data from a data source and outputs the data to a matrix switch and a detector, control signals are detected within the received data and stored for further processing, and a processor controls the directing functions of (1) the matrix switch which receives the data as input and can direct selected portions of the data to a data transmission means and (2) the device which stores and transfers the control signals to the processor. Present application claim 8 relates to a method of generating and encoding signals to control a presentation, including receiving a program containing video, receiving and encoding into a control signal an instruction effective to instruct a user station processor to generate or output program supplement or completion information, and storing the control signal in conjunction with the program. Patent claim 15 does not disclose the element of storing a program with video, much less storing a control signal in conjunction with the stored video information. Patent claim 15 does not disclose the concept of encoding an instruct signal to translate it to a control signal. Patent claim 15 does not cover the subject matter of application claim 8. The two claims are capable of separate manufacture, use, and sale as claimed. These two inventions are distinct.

**U.S. patent 5,109,414, claim 15**

In a signal processing system,  
a receiver/distribution means for receiving data from a data source and for outputting said data to a matrix switch means and a control signal detector means,  
a matrix switch means for receiving said data from said receiver/distributor means and for directing selected portions of said received data to a data transmission means,  
a control signal detector means for detecting control signals respecting said data and transferring said control signals to a storage/transfer means, said control signal means being configured to detect said control signals at a predetermined location within said data,  
a storage/transfer means for receiving and storing said control signals and for transferring at least a portion of said control signals to a processor means for further processing, and  
a processor means for controlling the directing functions of said matrix switch means and the transfer functions of said storage/transfer means based on instructions contained in said control signals.

**Present application claim 8 (Amended)**

8. (Amended) A method of generating and encoding signals to control a presentation comprising the steps of:  
receiving and storing a program that contains video information;  
receiving an instruction, said instruction having effect to instruct a user station processor to generate or output information to supplement or complete said program;  
encoding said instruction, said step of encoding translating said instruction to a first control signal with said effect; and  
storing said first control signal in conjunction with said program.

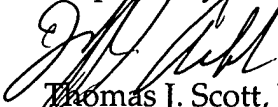
### III. CONCLUSION

In accordance with the foregoing it is respectfully submitted that all outstanding objections are rejections have been overcome and/or rendered moot. Further, that all pending claims patentably distinguish over the prior art, taken in any proper combination. Thus, there being no further outstanding objections or rejections, the application is submitted as being in a condition for allowance, which action is earnestly solicited.

If the Examiner has any remaining informalities to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for telephone interview to discuss resolution of such informalities.

Date: July 7, 1997  
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Respectfully submitted,



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